AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) A method for operating a wireless network comprised of ~~end nodes~~ a source node, a destination node and at least one intermediate node disposed therebetween, comprising:

at ~~an originating node of a session with a destination node~~ the source node, initiating a route search by sending a Route Request message;

at the destination node, or another node having knowledge of the destination node, replying to the ~~originating node~~ Route Request message sent by the source node with a Route Reply message when there is a valid route, where the Route Reply message comprises route delay information relative to the responding node ~~is contained within the Route Reply message~~; and

selecting a route with a smallest route delay to send a packet from the ~~originating~~ source node to the destination node.

2. (Currently Amended) A method as in claim 1, where if either one of the ~~originating~~ source node or the destination node detects a violation of path Quality of Service, further comprising initiating a re-route search.

3. (Currently Amended) A method as in claim 1, where if either one of the ~~originating~~ source node or the destination node detects that the route delay exceeds a threshold route delay value, further comprising initiating a re-route search.

4. (Currently Amended) A method as in claim 1, where an intermediate node is configured to determine ~~determines the route~~ a round trip path delay between itself and the destination node by:

receiving a probe message sent by the ~~originating~~ source node to the destination node;

recording a time of arrival of the probe message;

forwarding the probe message towards the destination node;

receiving a response to the probe message from the destination node;

recording a time of arrival of the response to the probe message; and

calculating the round trip path delay between itself and the destination node by subtracting the recorded time of arrival of the probe message from the recorded time of arrival of the response to the probe message.

5. (Original) A method as in claim 4, further comprising storing the round trip path delay in at least a link table and a routing table of the intermediate node.

6. (Original) A method as in claim 4, further comprising:

periodically determining a received signal strength indication at the intermediate node; and

if the determined received signal strength indication is below a threshold value, adjusting the calculated round trip path delay value.

7. (Original) A method as in claim 5, further comprising:

periodically determining a received signal strength indication at the intermediate node; and

if the determined received signal strength indication is below a threshold value that indicates a degraded link, increasing the link delay and stored round trip path delay value in the node that detects that the signal strength is below the threshold value, and updating a routing table for all nodes that contain a route entry that comprise the degraded link.

8. (Original) A method as in claim 7, further comprising decreasing a link timeout value in the intermediate node in order to increase the speed of detection of a link break condition.

9. (Original) A method as in claim 8, further comprising, in response to detecting the link break condition, sending a Route Error message to the originating node to cause the originating node to trigger a re-route operation.

10. (Currently Amended) A method as in claim 1, where the wireless network operates in accordance with an ad hoc routing protocol.

11. (Currently Amended) A method as in claim 1, where the wireless network operates in accordance with an Ad Hoc On-Demand Distance Vector (AODV) routing protocol.

12. (Currently Amended) A wireless network comprised of ~~end nodes~~ a source node, a destination node and at least one intermediate node disposed therebetween, comprising in said nodes programmed data processors for implementing a routing protocol, where ~~for~~ at ~~an originating node of a session with a destination node~~ the source node, said data processor initiates a route search by sending a Route Request message; where in ~~a~~ the destination node, or another node having knowledge of said destination node, a data processor replies to said originating node with a Route Reply message when there is a valid route, where said Route Reply message comprises route delay information relative to said responding node ~~is contained within said Route Reply message~~; and where said data processor in said ~~originating~~ source node selects a route with a smallest route delay to send a packet to said destination node.

13. (Currently Amended) A wireless network as in claim 12, where if either one of said ~~originating~~ source node or said destination node detects a violation of path Quality of Service, the respective data processor initiates a re-route search.

14. (Currently Amended) A wireless network as in claim 12, where if either one of said ~~originating~~ source node or said destination node detects that said route delay exceeds a threshold route delay value, the respective data processor initiates a re-route search.

15. (Currently Amended) A wireless network as in claim 12, where a data processor of an intermediate node is configured to determine ~~determines said route~~ a round trip path delay between ~~itself~~ said intermediate node and said destination node by receiving a probe message sent by said ~~originating~~ source node to said destination node; recording a time of arrival of said probe message; forwarding said probe message towards said destination node; receiving a response to said probe message from said destination node; recording a time of arrival of said response to said probe message; and calculating said round trip path delay between ~~itself~~ said intermediate node and said destination node by subtracting said recorded time of arrival of said probe message from said recorded time of arrival of said response to said probe message.

16. (Original) A wireless network as in claim 15, where said data processor of said intermediate node further stores said round trip path delay in at least a link table and a routing table of said intermediate node.

17. (Original) A wireless network as in claim 15, where said data processor of said intermediate node further periodically determines a received signal strength indication at said intermediate node and, if said determined received signal strength indication is below a threshold value, adjusts said calculated round trip path delay value.

18. (Original) A wireless network as in claim 16, where said data processor of said intermediate node further periodically determines a received signal strength indication at the intermediate node, and if the determined received signal strength indication is below a threshold value that indicates a degraded link, increases the link delay and stored round trip path delay value in the node that detects that the signal strength is below the threshold value, and thereafter initiates an update of the routing table for all nodes that contain a route entry that comprise the degraded link.

19. (Original) A wireless network as in claim 18, where said data processor of said intermediate

node further decreases a link timeout value in said intermediate node in order to increase the speed of detection of a link break condition.

20. (Original) A wireless network as in claim 19, where said data processor of said intermediate node, in response to detecting said link break condition, sends a Route Error message to said originating node to cause said originating node to trigger a re-route operation.

21. (Currently Amended) A wireless network as in claim 12, where said wireless network operates in accordance with an ad hoc routing protocol.

22. (Currently Amended) A wireless network as in claim 12, where said wireless network operates in accordance with an Ad Hoc On-Demand Distance Vector (AODV) routing protocol.

23. (Currently Amended) An ~~mobile node~~ electronic device ~~comprising a programmed data processor for causing said mobile node to function as an intermediate node between two end nodes in a wireless network, said~~ comprising:

a receiver ~~data processor operable to determine a route delay between the mobile node and a said first end node by receiving~~ operable to receive a probe message sent by ~~a~~ second end node to ~~said~~ a first end node;

~~said~~ a data processor ~~being further~~ operable ~~for recording~~ to record a time of arrival of said probe message; and

a transmitter ~~for forwarding~~ operable to forward said probe message towards said first end node, ~~; for receiving~~ wherein said receiver is further operable to receive a response to said probe message from said first end node, ~~; for recording~~ wherein said data processor is further operable to record a time of arrival of said response to said probe message[[;]] and ~~for calculating~~ to calculate a path delay between ~~itself~~ the electronic device and said first node ~~by subtracting said recorded time of arrival of said probe message from~~ using said recorded times of arrival ~~of said response to said probe message,~~ wherein said transmitter is further operable to transmit said calculated path delay to at

least one of said first end node and said second end node.

24. (Currently Amended) An ~~mobile node~~ electronic device as in claim 23, ~~where said data processor further stores~~ further comprising a memory configured to store said calculated path delay in at least a link table and a routing table.

25. (Currently Amended) An ~~mobile node~~ electronic device as in claim 23, where said data processor is further operable to periodically determine[[s]] a received signal strength indication and, if said determined received signal strength indication is below a threshold value, to adjust[[s]] said calculated path delay value.

26. (Currently Amended) An ~~mobile node~~ electronic device as in claim 24, where said data processor is further operable to periodically determine[[s]] a received signal strength indication at the intermediate node, and if the determined received signal strength indication is below a threshold value that indicates a degraded link, to increase[[s]] the link delay and stored ~~round trip~~ path delay ~~value~~ in the node that detects that the signal strength is below the threshold value, and thereafter to initiate[[s]] an update of the routing table for all nodes that contain a route entry that comprises the degraded link.

27. (Currently Amended) An ~~mobile node~~ electronic device as in claim 26, where said data processor is further operable to decrease[[s]] a link timeout value in order to increase the speed of detection of a link break condition.

28. (Currently Amended) An ~~mobile node~~ electronic device as in claim 27, where said ~~data processor~~ transmitter is operable, in response to said data processor detecting said link break condition, to send[[s]] a Route Error message to said second node to initiate a re-route operation.

29. (Currently Amended) An ~~mobile node~~ electronic device as in claim 23, where said electronic device comprises a component in a wireless network that operates in accordance with an

ad hoc routing protocol.

30. (Currently Amended) An ~~mobile node~~ electronic device as in claim 23, where said electronic device comprises a component in a wireless network that operates in accordance with an Ad Hoc On-Demand Distance Vector (AODV) routing protocol.